WHAT IS CLAIMED:

1. An electronic device, comprising:

a substrate;

a first electrode on said substrate;

a plurality of substantially electrically isolated conducting polymer regions on said first electrode;

an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

a second electrode on said active electronic layer,

wherein said plurality of substantially electrically isolated conducting polymer regions are formed by selectively depositing a solution that includes water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and a ratio of said PEDOT to said PSS is one part by weight of said PEDOT to at most ten parts by weight of said PSS.

2. The electronic device of claim 1 wherein said ratio of said PEDOT to said PSS is one part by weight of said PEDOT to six parts by weight of said PSS.

3. The electronic device of claim 1 wherein said plurality of substantially electrically isolated conducting polymer regions are selectively deposited using any one of the following deposition techniques: ink jet printing, flex printing, or screen printing.

4. The electronic device of claim 1 wherein

said electronic device is an organic light emitting diode ("OLED") display;

said first electrode is an anode;

said active electronic layer is an organic electroluminescent layer; and

said second electrode is a cathode.

5. The electronic device of claim 4 wherein

said anode is patterned to form a plurality of anode strips; and

said cathode is patterned to form a plurality of cathode strips, said plurality of cathode strips are substantially perpendicular to said plurality of anode strips,

wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.

6. A method to fabricate an electronic device, comprising:

depositing a first electrode on a substrate;

selectively depositing a conducting polymer material on said first electrode to form a plurality of substantially electrically isolated conducting polymer regions on said first electrode;

depositing an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

depositing a second electrode on said active electronic layer,

wherein said conducting polymer material is comprised of water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and a ratio of said PEDOT to said PSS is one part by weight of said PEDOT to at most ten parts by weight of said PSS.

7. The method of claim 6 wherein said ratio of said PEDOT to said PSS is one part by weight of said PEDOT to six parts by weight of said PSS.

8. The method of claim 6 wherein selectively depositing said conducting polymer material includes any one of the following deposition techniques: ink jet printing, flex printing, or screen printing.

9. The method of claim 6 wherein

said electronic device is an OLED display;

said first electrode is an anode;

said active electronic layer is an organic electroluminescent layer; and

said second electrode is a cathode.

10. The method of claim 9 further comprising

patterning said anode to form a plurality of anode strips; and

patterning said cathode to form a plurality of cathode strips,

wherein said plurality of cathode strips are substantially perpendicular to said plurality of anode strips, and

wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.

11. An electronic device, comprising:

a substrate;

a first electrode on said substrate;

a plurality of substantially electrically isolated conducting polymer regions on said first electrode;

an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

a second electrode on said active electronic layer,

wherein said plurality of substantially electrically isolated conducting polymer regions are formed by selectively depositing a solution that includes water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and each of said plurality of substantially electrically isolated conducting polymer regions has a conductivity that ranges from about 1.2×10^{-4} S/cm to about 10 S/cm.

12. The electronic device of claim 11 wherein said conductivity of each of said plurality of substantially electrically isolated conducting polymer regions ranges from about 10^{-3} S/cm to about 10^{-1} S/cm.

13. The electronic device of claim 11 wherein said plurality of substantially electrically isolated conducting polymer regions are selectively deposited using any

one of the following deposition techniques: ink jet printing, flex printing, or screen printing.

14. The electronic device of claim 11 wherein

said electronic device is an organic light emitting diode ("OLED") display;

said first electrode is an anode;

said active electronic layer is an organic electroluminescent layer; and

said second electrode is a cathode.

15. The electronic device of claim 14 wherein

said anode is patterned to form a plurality of anode strips; and

said cathode is patterned to form a plurality of cathode strips, said plurality of cathode strips are substantially perpendicular to said plurality of anode strips,

wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions, and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.

16. A method to fabricate an electronic device, comprising:

depositing a first electrode on a substrate;

selectively depositing a conducting polymer material on said first electrode to form a plurality of substantially electrically isolated conducting polymer regions on said first electrode;

depositing an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

depositing a second electrode on said active electronic layer,

wherein said conducting polymer material is comprised of water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and each of said plurality of substantially electrically isolated conducting polymer regions has a conductivity that ranges from about 1.2×10^{-4} S/cm to about 10 S/cm.

17. The method of claim 16 wherein said conductivity of each of said plurality of substantially electrically isolated conducting polymer regions ranges from about 10^{-3} S/cm to about 10^{-1} S/cm.

18. The method of claim 16 wherein selectively depositing said conducting polymer material includes any one of the following deposition techniques: ink jet printing, flex printing, or screen printing.

19. The method of claim 16 wherein
said electronic device is an OLED display;
said first electrode is an anode;
said active electronic layer is an organic electroluminescent layer; and
said second electrode is a cathode.

20. The method of claim 19 further comprising
patterning said anode to form a plurality of anode strips; and
patterning said cathode to form a plurality of cathode strips,
wherein said plurality of cathode strips are substantially perpendicular to said plurality of anode strips, and
wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.

21. A method to fabricate an electronic device, comprising:
depositing a first electrode on a substrate;
nonselectively depositing a conducting polymer material on said first electrode to form a continuous conducting polymer layer on said first electrode;
patterning said continuous conducting polymer layer to form a plurality of substantially electrically isolated conducting polymer regions on said first electrode;
depositing an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

depositing a second electrode on said active electronic layer,

wherein said conducting polymer material is comprised of water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and at least one of: (1) a ratio of said PEDOT to said PSS is one part by weight of said PEDOT to at most ten parts by weight of said PSS, and (2) each of said plurality of substantially electrically isolated conducting polymer regions has a conductivity that ranges from about 1.2×10^{-4} S/cm to about 10 S/cm.

22. The method of claim 21 wherein nonselectively depositing said conducting polymer material includes any one of the following deposition techniques: spin coating, dip coating, web coating, or spray coating.

23. The method of claim 21 wherein patterning said continuous conducting polymer layer includes any one of the following patterning techniques: laser ablation or plasma discharge.

24. The method of claim 21 wherein said ratio of said PEDOT to said PSS is one part by weight of said PEDOT to six parts by weight of said PSS.

25. The method of claim 21 wherein said conductivity of each of said plurality of substantially electrically isolated conducting polymer regions ranges from about 10^{-3} S/cm to about 10^{-1} S/cm.

26. The method of claim 21 wherein

said electronic device is an OLED display;

said first electrode is an anode;

said active electronic layer is an organic electroluminescent layer; and

said second electrode is a cathode.

27. The method of claim 26 further comprising

patterning said anode to form a plurality of anode strips; and

patterning said cathode to form a plurality of cathode strips,

wherein said plurality of cathode strips are substantially perpendicular to said plurality of anode strips, and

wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.

28. An electronic device, comprising:

a substrate;

a first electrode on said substrate;

a plurality of substantially electrically isolated conducting polymer regions on said first electrode;

an active electronic layer on said plurality of substantially electrically isolated conducting polymer regions; and

a second electrode on said active electronic layer,

wherein said plurality of substantially electrically isolated conducting polymer regions are formed by:

nonselectively depositing a conducting polymer material on said first electrode to form a continuous conducting polymer layer on said first electrode, and

patterning said continuous conducting polymer layer to form said plurality of substantially electrically isolated conducting polymer regions, and

wherein said conducting polymer material is comprised of water, polyethylenedioxythiophene ("PEDOT"), and polystyrenesulfonic acid ("PSS"), and at least one of: (1) a ratio of said PEDOT to said PSS is one part by weight of said PEDOT to at most ten parts by weight of said PSS, and (2) each of said plurality of substantially electrically isolated conducting polymer regions has a conductivity that ranges from about 1.2×10^{-4} S/cm to about 10 S/cm.

29. The electronic device of claim 28 wherein nonselectively depositing said conducting polymer material includes any one of the following deposition techniques: spin coating, dip coating, web coating, or spray coating.

30. The electronic device of claim 28 wherein patterning said continuous conducting polymer layer includes any one of the following patterning techniques: laser ablation or plasma discharge.

31. The electronic device of claim 28 wherein said ratio of said PEDOT to said PSS is one part by weight of said PEDOT to six parts by weight of said PSS.

32. The electronic device of claim 28 wherein said conductivity of each of said plurality of substantially electrically isolated conducting polymer regions ranges from about 10^{-3} S/cm to about 10^{-1} S/cm.

33. The electronic device of claim 28 wherein
said electronic device is an OLED display;
said first electrode is an anode;
said active electronic layer is an organic electroluminescent layer; and
said second electrode is a cathode.

34. The electronic device of claim 33 wherein
said anode is patterned to form a plurality of anode strips; and
said cathode is patterned to form a plurality of cathode strips, said plurality of cathode strips are substantially perpendicular to said plurality of anode strips,
wherein each of a plurality of intersections of said plurality of anode strips and said plurality of cathode strips together with both (1) a corresponding one of said plurality of substantially electrically isolated conducting polymer regions and (2) said organic electroluminescent layer form a substantially electrically isolated pixel.